Page 27,

Line 12, change "Nos." to --No.--.

Line 13, after "and" insert

--Japanese Patent Application No.--.

Page 43,

Line 16, change "19.85" to --19.83--.

Page 44,

Line 3, change "BR=0.406E-7," to --BR=0.401E-7,".

Line 7, change "AP=-0.249," to --AP=+0.249,--.

Line 9, change "Ky=6.825," to --Ky=6.285,--.

Line 10, change "Kx=-1.33E+6" to --Kx=-1.33E-6--.

IN THE CLAIMS:

Please amend Claims 1 through 4, 7, 8, 26, 46, 51, 68, and 72 as follows:

1. (Twice Amended) A display device comprising:

display means for forming image information; and

optical means for guiding light from said display means to an eye, said optical means including a first curved face for totally reflecting the light [when an incident angle of the light is greater than a critical angle] and a second

curved face for reflecting light which is totally reflected by said first curved face,

wherein the light, in an optical path from said display means to the eye, is totally reflected by said first curved face and is transmitted by said first curved face.

2. (Twice Amended) A display device according to claim 1, wherein said optical means comprises, in the order in the proceeding direction of light, an entrance face for introducing the light from said display means, said first curved face, and [a reflecting] said second curved face for reflecting the light toward the eye, and

wherein the light reflected by said [reflecting] second curved face is transmitted by said first curved face and reaches the eye.

3. (Twice Amended) A display device according to claim 1, wherein optical power of said first curved face varies in accordance with an azimuthal angle.

4. (Twice Amended) A display device according to claim 1, satisfying a condition $|\alpha| \leq 20°$ wherein α is an angle between a line tangent to a vertex of said first curved face and a line perpendicular to the optical axis of the eye.

7. (Twice Amended) A display device according to claim 2, wherein said [reflecting] second curved face comprises a half-transmitting face.

8. (Twice Amended) A display device according to claim 2, wherein optical power of said [reflecting] second curved face varies in accordance with an azimuthal angle.

26. (Amended) An optical element according to Claim 25, wherein said entrance and exit surfaces [having] have different optical powers according to an azimuth angle.

46. (Amended) An optical apparatus comprising:

a device for displaying an image; and

an ocular optical system for projecting an image formed by said device for displaying an image and for leading said image to an observer's eyeball,

said ocular optical system comprising at least first, second and third surfaces, in which a space defined by said surfaces is filled with a medium having refractive index larger than 1,

said device for displaying an image being disposed at a position facing said third surface,

said first, second and third surfaces including, in order from an observer's eyeball side toward said device for displaying an image, said first surface serving as both a

refracting surface and an internally reflecting surface, said second surface serving as a reflecting surface of a positive power which faces said first surface and is decentered or tilted with respect to an observer's visual axis, and said third surface serving as a refracting surface closest to said device for displaying an image, at least two of said at least first, second and third surfaces having a finite curvature radius,

wherein any one of said first, second and third surfaces is a decentered aspherical surface,

wherein any one of said first, second and third surfaces is an anamorphic surface, and

said optical apparatus satisfies the following condition in a case where a vertical plane containing said observer's visual axis is defined as a YZ-plane, and a horizontal plane perpendicular to said YZ-plane is defined as an XZ-plane:

$$1 < |R_{y2}/R_{x2}| \leq 1.921$$

where R_{y2} is a curvature radius of said second surface in said YZ-plane, and R_{x2} is a curvature radius of said second surface in said XZ-plane.

---

51. (Amended) An optical apparatus comprising:

a device for displaying an image; and

an ocular optical system for projecting an image formed by said device for displaying an image and for leading said image to an observer's eyeball,

said ocular optical system comprising at least first, second and third surfaces, in which a space defined by said surfaces is filled with a medium having a refractive index larger than 1,

said device for displaying an image being disposed at a position facing said third surface,

said first, second and third surfaces including, in order from an observer's eyeball side toward said device for displaying an image, said first surface serving as both a refracting surface and an internally reflecting surface, said second surface serving as a reflecting surface of a positive power which faces said first surface and is decentered or tilted with respect to an observer's visual axis, and said third surface serving as a refracting surface closest to said device for displaying an image, at least two of said at least first, second and third surface having a finite curvature radius,

wherein internal reflection that is performed by said first surface is total reflection, wherein any one of said first, second and third surfaces is a decentered aspherical surface,

wherein any one of said first, second and third surfaces is an anamorphic surface, and

said optical apparatus satisfies the following condition in a case where a vertical plane [perpendicular to the YZ-plane] containing said observer's visual axis is defined as a YZ-plane, and a horizontal plane perpendicular to said YZ-plane is defined as an XZ-plane:

$$1 < |R_{y2}/R_{x2}| \leq 1.921$$

F9 canceled

where R_{y2} is a curvature radius of said second surface in said YZ-plane, and R_{x2} is a curvature radius of said second surface in said XZ-plane.

---

68. An optical apparatus according to claim 27, wherein when a radius of curvature in generatrix direction (y direction) and a radius of curvature in meridian direction in the i-th surface counted from the observer's eyeball are r_{yi} and r_{xi}, respectively, and an anamorphic aspherical surface (AAL) is defined by the following equation,

F10

$$z = \frac{y^2/r_{yi}+x^2/r_{xi}}{1+\sqrt{1-\{(1+k_{yi})(y/r_{yi})^2+(1+k_{xi})(x/r_{xi})^2\}}} + AR_i\{(1+AP_i)y^2+(1-AP_i)x^2\}^2+BR_i\{(1+BP_i)y^2+(1-BP_i)x^2\}^3 + CR_i\{(1+CP_i)y^2+(1-CP_i)x^2\}^4+DR_i\{(1+DP_i)y^2+(1-DP_i)x^2\}^5$$

and a rotationally symmetrical aspherical surface (AL) is defined by the following equation,

$$z = \frac{y^2/r_{yi}}{1+\sqrt{1-(1+k_i)(y/r_{yi})^2}} + A_iy^4 + B_iy^6 + C_iy^8 + D_iy^{10}$$

where k_i, A_i, B_i, C_i, and D_i are aspherical coefficients,

said optical apparatus has the following properties:

1g

F10 only

(Visual line detecting system)

	r_{yi} Radius of curvature in generatrix cross section	r_{xi} Radius of curvature in meridian cross section	Vertex coordinate Y, Z	Tilt angle in generatrix cross section		
i= 1	∞		(0, 0)	0 °	eye	
i= 2	-2158.074	-32.224	(0.60, 19.85)	-10.55	AAL	nd=1.49171 νd=57.4
i= 3	-63.157	-32.870	(34.76, 30.92)	15.81	AAL-M	
i= 4	-2158.074	-32.224	(0.60, [19.85)] 19.83)	-10.55	AAL-M	
i= 5	72.108	1049.744	(14.82, 29.02)	53.74	AAL	
i= 6	∞		(14.98, 29.14)	53.74		nd=1.51633 νd=64.1
i= 7	∞		(17.19, 29.51)	18.74	M	
i= 8	∞		(14.98, 29.14)	53.74	M	
i= 9	∞		(20.31, 21.88)	-66.27		
i=10	-1.889		(22.03, 23.31)	-66.27	AL	nd=1.49171 νd=57.4
i=11	1.426		(24.77, 22.10)	-66.27	AL	
i=12	∞		(25.96, 21.91)	-63.23	image sensor	
(Observation system)						
i= 8	∞		(17.40, 30.91)	53.74		nd=1.51633 νd=64.1
i= 9	∞		(18.21, 31.50)	44.74	image information	

(AAL, AL data)

AAL2, 4:

[Ky=-13763.5, AR=-0.170E-4, BR=0.406E-7, CR=-0.154E-9, DR=0.223E-12]

Ky=-13763.5, AR=-0.170E-4, BR=0.401E-7, CR=-0.154E-9, DR=0.223E-12

Kx=-3.896, AP=-0.245, BP=0.416E-1, CP=0.870E-1, DP=-0.203E-1

AAL3:

Ky=1.238, AR=-0.317E-5, BR=0.248E-8, CR=-0.179E-11, DR=0.608E-15

[Kx=0.279, AP=-0.249, BP=0.327E-2, CP=-0.192E-1, DP=0.181E-1]

Kx=0.279, AP=+0.249, BP=0.327E-2, CP=-0.192E-1, DP=0.181E-1

AAL5:

[Ky=6.825, AR=-0.114E-4, BR=-0.402E-6, CR=0.113E-8, DR=-0.411E-10

Kx=-1.33E+6, AP=0.273E+1, BP=0.155E+1, CP=0.160E+1, DP=-0.644]

Ky=6.285, AR=-0.114E-4, BR=-0.402E-6, CR=0.113E-8, DR=-0.411E-10

Kx=-1.33E-6, AP= 0.273E+1, BP=0.155E+1, CP=0.160E+1, DP=-0.644

AL10 : K=-3.858, A=0.851E-2, B=-0.101, C=0.149, D=-0.755E-1

AL11 : K=-0.113, A=0.195, B=-0.590, C=0.471, D=-0.138